

# Specifications guide

## Iron ore

Latest update: August 2019

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## DEFINITIONS OF THE TRADING LOCATIONS FOR WHICH PLATTS PUBLISHES INDEXES OR ASSESSMENTS

All the assessments listed here employ Platts Assessments Methodology, as published at [https://www.spglobal.com/platts/plattscontent/\\_assets/\\_files/en/our-methodology/methodology-specifications/platts-assessments-methodology-guide.pdf](https://www.spglobal.com/platts/plattscontent/_assets/_files/en/our-methodology/methodology-specifications/platts-assessments-methodology-guide.pdf).

These guides are designed to give Platts subscribers as much information as possible about a wide range of methodology and specification questions.

This guide is current at the time of publication. Platts may issue further updates and enhancements to this guide and will announce these to subscribers through its usual publications of record. Such updates will be included in the next version of this guide. Platts editorial staff and managers are available to provide guidance when assessment issues require clarification.

The following Iron Ore specifications guide contains the primary specifications and methodologies for Platts Iron Ore assessments throughout the world.

These are the timestamps used for Platts iron ore assessments. Data reported at or after these timestamps is not considered in the assessment process.

**Asia:** 5.30pm Singapore

**Atlantic:** 4.30pm London

### IRON ORE ASSESSMENTS

Assessment	Code	Mavg	Wavg	Rolling Mavg	Quality	Quantity	Dimensions	Location	Timing	Payment terms	UOM
IODEX 62% FE CFR China	IODBZ00	IODBZ03	IODBZ02	IODBZ04	62% Fe, 8% moisture, 4% silica, 2.25% alumina, 0.09% phosphorus, 0.02% sulfur	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
TSI Iron Ore Fines 62% Fe CFR China	TS01021	TSMAU03		TSMBY03	62% Fe, 8% moisture, 4% silica, 2.25% alumina, 0.09% phosphorus, 0.02% sulfur	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
IO Fines 65% FE CFR China	IOPRM00	IOPRM03			65% Fe, 8.5% moisture, 3.5% silica, 1% alumina, 0.075% phosphorus	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
IO Fines FE 58% Low Alumina CFR China	IONC580	IONC583			58% Fe, 9% moisture, 10% loss on ignition, 5.5% silica, 1.5% alumina, 0.05% phosphorus, 0.02% sulfur	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
TSI Iron Ore Fines 58% Fe 1.5% Al China Imports CFR Qingdao Port	TS01047	TSMBU03		TSMBX03	58% Fe, 9% moisture, 10% loss on ignition, 5.5% silica, 1.5% alumina, 0.05% phosphorus, 0.02% sulfur	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
IO Fines FE 58% CFR China	IODFE00	IODFE03			58% Fe, 10% moisture, 5% silica, 4% alumina, 0.05% phosphorus	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
IO Spot Lump Premium 62.5% CFR China	IOCLP00	IOCLP03		IOCLZ03	62.5% Fe, 4% moisture, 3.5% silica, 1.5% alumina, 0.075% phosphorus, 0.02% sulfur	min. 50,000 mt	Sizing of max 15% <6.3 mm and max 15% >31.5 mm	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
IO Spot Blast Furnace Pellet Premium 65% CFR China (Weekly)	IOBFC04				65% Fe blast furnace pellet, CFR China: 0.35% alumina, 5% silica, 0.02% phosphorus, 0.003% sulfur, 250 Cold Crushing Strength (CCS)	min. 35,000 mt	Maximum sizing of 2.5% under 5 mm	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt

**IRON ORE ASSESSMENTS**

Assessment	Code	Mavg	Wavg	Rolling Mavg	Quality	Quantity	Dimensions	Location	Timing	Payment terms	UOM
IO Spot Blast Furnace Pellet Premium 64% CFR China (Weekly)	IQCQS04	IQCQS03			64% Fe blast furnace pellet, CFR China: 2.70% alumina, 3.5% silica, 0.08% phosphorus, 0.008%min. 35,000 mt sulfur, 230 Cold Crushing Strength (CCS)		Maximum sizing of 5.0% under 5 mm	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
IO Spot Blast Furnace Pellet 64% CFR China (Weekly)	IQCQR04	IQCQR03			64% Fe blast furnace pellet, CFR China: 2.70% alumina, 3.5% silica, 0.08% phosphorus, 0.008%min. 35,000 mt sulfur, 230 Cold Crushing Strength (CCS)		Maximum sizing of 5.0% under 5 mm	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
IOPEX 62% Fe FOT East China	IOPBN00	IOPBN03		IOPB000	62% Fe, 8% moisture, 4% silica, 2.25% alumina, 0.09% phosphorus, 0.02% sulfur	min. 5,000 mt	Granular size of up to 10 mm for up to 90% of lot	FOT Rizhao, Qingdao		TT/CAD	Yuan/wmt
IOPEX 62% Fe East China (import parity USD-equivalent)	IOPDC00	IOPCC03			62% Fe, 8% moisture, 4% silica, 2.25% alumina, 0.09% phosphorus, 0.02% sulfur	NA	NA	NA		NA	\$/dmt
IOPEX 62% Fe FOT North China	IOPBL00	IOPBL03		IOPBM00	62% Fe, 8% moisture, 4% silica, 2.25% alumina, 0.09% phosphorus, 0.02% sulfur	min. 5,000 mt	Granular size of up to 10 mm for up to 90% of lot	FOT Caofeidian, Jingtang		TT/CAD	Yuan/wmt
IOPEX 62% Fe North China (import parity USD-equivalent)	IOPCC00	IOPDC03			62% Fe, 8% moisture, 4% silica, 2.25% alumina, 0.09% phosphorus, 0.02% sulfur	NA	NA	NA		NA	\$/dmt
Iron ore Alumina differential per 1% with 1-2.5% \$/DMT	IOADF10				1% alumina within 1-2.5% range for fines with 60-63.5% Fe	NA*	NA	NA	NA	NA	\$/dmt
Iron Ore Alumina Differential per 1% with 2.5-4% \$/DMT	IOALE00	IOALE03			1% alumina within 2.5-4% range for fines with 60-63.5% Fe	NA*	NA	NA	NA	NA	\$/dmt
Iron Ore Alumina Differential per 1% within <5% (55-60% Fe Fines)	TSIAF00	TSIAF03			1% alumina below 5% for fines with 55-60% Fe	NA*	NA	NA	NA	NA	\$/dmt
Mid Range 1% Fe Diff 60-63.5 Fe \$/DMT	IOMGD00	IOMGD03			1% Fe within 60-63.5% range	NA*	NA	NA	NA	NA	\$/dmt
Iron Ore Fe Differential per 1% Fe within 55-60% Fe Fines	TSIAD00	TSIAD03			1% Fe within 55-60% range	NA*	NA	NA	NA	NA	\$/dmt
Iron Ore Silica Differential per 1% within 55-60% Fe Fines	TSIAI00	TSIAI03			1% silica for fines with 55-60% Fe	NA*	NA	NA	NA	NA	\$/dmt
Iron ore Silica Differential per 1% with <4.5% \$/DMT	IOALF00	IOALF03			1% silica below 4.5% for fines with 60-63.5% Fe	NA*	NA	NA	NA	NA	\$/dmt
Iron ore Silica differential per 1% with 4.5-6.5% \$/DMT	IOPPS10				1% silica within 4.5-6.5% range for fines with 60-63.5% Fe	NA*	NA	NA	NA	NA	\$/dmt
Iron ore Silica differential per 1% with 6.5-9% \$/DMT	IOPPS20				1% silica within 6.5-9% range for fines with 60-63.5% Fe	NA*	NA	NA	NA	NA	\$/dmt
Iron ore Phosphorus differential per 0.01% with 0.09-0.12% \$/DMT	IOPPQ00				0.01% phosphorus within 0.09-0.12% range for fines with 60-63.5% Fe	NA*	NA	NA	NA	NA	\$/dmt
Iron ore Phosphorus differential per 0.01% with 0.09-0.10% \$/DMT	IOPPR00				0.01% phosphorus within 0.09-0.10% range for fines with 60-63.5% Fe	NA*	NA	NA	NA	NA	\$/dmt
Iron ore Phosphorus differential per 0.01% with 0.10-0.11% \$/DMT	IOPPT00				0.01% phosphorus within 0.10-0.11% range for fines with 60-63.5% Fe	NA*	NA	NA	NA	NA	\$/dmt

## IRON ORE ASSESSMENTS

Assessment	Code	Mavg	Wavg	Rolling Mavg	Quality	Quantity	Dimensions	Location	Timing	Payment terms	UOM
Iron ore Phosphorus differential per 0.01% with 0.11-0.12% \$/DMT	IOPPU00				0.01% phosphorus within 0.11-0.12% range for fines with 60-63.5% Fe	NA*	NA	NA	NA	NA	\$/dmt
Iron ore Phosphorus differential per 0.01% with 0.12-0.15% \$/DMT	IOPPV00				0.01% phosphorus within 0.12-0.15% range for fines with 60-63.5% Fe	NA*	NA	NA	NA	NA	\$/dmt
IO Concentrate 66% Fe DDP Tangshan VAT-inclusive Wkly	SB01159	SBMAJ03			66% Fe, 8% moisture, 5% silica, 0.75% alumina, max 0.03% phosphorus, max 0.05% sulfur	min. 1,000 mt	Granular size of more than 0.074 mm for at least 70% of cargo	Delivered to mill in Tangshan, Hebei	Delivery within 2 weeks from publication date	Cash at sight	Yuan/dmt (incl. VAT)
Atlantic Basin Iron Ore Pellets Est Mthly CtrPr Brazil Exp FOB	SB01095				65% Fe blast furnace pellet: Silica 3%; Alumina 0.5%; CCS 275; LTD +6.3 mm, 80; Sizing over 9 mm is >94%; Sizing below 6.3 mm <2.5%.	not specified	not specified	FOB Atlantic, normalized to Brazil	Provisional price for loadings in month of publication	not specified	\$/dmt
Atlantic Iron ore blast furnace pellet CP premium	IOBFP00				65% Fe blast furnace pellet: Silica 3%; Alumina 0.5%; CCS 275; LTD +6.3 mm, 80; Sizing over 9 mm is >94%; Sizing below 6.3 mm <2.5%.	not specified	not specified	FOB Atlantic, normalized to Brazil	Provisional price for loadings in month of publication	not specified	\$/dmt
Iron Ore Direct Reduction Pellet Premium	IODRP00				67.5% Fe DR pellet, 1.5% Silica, 300 CCS, and sizing over 9 mm >94%.	not specified	not specified	NA	Provisional price for loadings in month of publication	not specified	\$/dmt

\*This is a differential of a particular impurity within a cargo.

## IRON ORE PHYSICAL DIFFERENTIAL ASSESMENTS

Assessment	Code	Mavg	Wavg	Quality	Quantity	Dimensions	Location	Timing	Payment terms	UOM
Iron Ore 58% Fe Low Alumina Differential to IODEX	IOALA00	IOALA03		Differential of the code IONC580 to IOBZ00	min. 50,000 mt	NA	CFR Qingdao basis	NA	NA	\$/dmt
Iron Ore 58% Fe Differential to IODEX	IOALC00	IOALC03		Differential of the code IODFE00 to IOBZ00	min. 50,000 mt	NA	CFR Qingdao basis	NA	NA	\$/dmt
Iron Ore 65% Fe Differential to IODEX	IOALB00	IOALB03		Differential of the code IOPRM00 to IOBZ00	min. 50,000 mt	NA	CFR Qingdao basis	NA	NA	\$/dmt

## IRON ORE SEABORNE BRAND ASSESSMENTS

Assessment	CODE	Mavg	QUALITY	QUANTITY	DIMENSIONS	LOCATION	TIMING	PAYMENT TERMS	UOM
Pilbara Blend Fines CFR Qingdao	IOPBQ00	IOPBQ03	as per typical specifications	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
Pilbara Blend Fines CFR Qingdao (Floating)	IOPBS00	IOPBS03	as per typical specifications	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
Brazilian Blend Fines CFR Qingdao	IOBBA00	IOBBA03	as per typical specifications	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
Brazilian Blend Fines CFR Qingdao (Floating)	IOBBB00	IOBBB03	as per typical specifications	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
Newman High Grade Fines CFR Qingdao	IONHA00	IONHA03	as per typical specifications	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
Newman High Grade Fines CFR Qingdao (Floating)	IONHB00	IONHB03	as per typical specifications	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
Mining Area C Fines CFR Qingdao	IOMAA00	IOMAA03	as per typical specifications	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
Mining Area C Fines CFR Qingdao (Floating)	IOMAB00	IOMAB03	as per typical specifications	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
Jimblebar Fines CFR Qingdao	IOJBA00	IOJBA03	as per typical specifications	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
Jimblebar Fines CFR Qingdao (Floating)	IOJBB00	IOJBB03	as per typical specifications	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
Yandi Fines CFR Qingdao	IOYFA00	IOYFA03	as per typical specifications	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt
Yandi Fines CFR Qingdao (Floating)	IOYFB00	IOYFB03	as per typical specifications	min. 50,000 mt	Granular size of up to 10 mm for up to 90% of cargo	CFR Qingdao basis	Delivery within 2-8 weeks from publication date	L/C at sight	\$/dmt

### Iron Ore Assessments

#### IOMGD00 1% Fe Differential (Range 60-63.5% Fe)

Platts 1% Fe differential is reflective of the value of 1% Fe in fines within the 60-63.5% Fe range. Its value is determined by comparing spot transactions of fines within the 60-63.5% Fe range. This per Fe value is assessed daily at Asian market close, and expressed in USD per dry metric ton.

#### TSIAD00 1% Fe Differential (Range 55-60% Fe)

Platts 1% Fe differential is reflective of the value of 1% Fe

in fines containing above 55% and up to 60% Fe. Its value is determined by comparing spot transactions of fines within the 55-60% Fe range. This per Fe value is assessed daily at Asian market close, and expressed in USD per dry metric ton.

#### Per 1% Alumina and Silica Differentials, per 0.01% Phosphorus Differential (Range 60-63.5% Fe)

IOADF10 Iron Ore Alumina Differential per 1% within 1-2.5% range

IOALE00 Iron Ore Alumina Differential per 1% within 2.5-4% range

IOALF00 Iron Ore Silica Differential per 1% with <4.5%

IOPPS10 Iron Ore Silica Differential per 1% within 4.5-6.5% range

IOPPS20 Iron Ore Silica Differential per 1% within 6.5-9% range

IOPPQ00 Iron Ore Phosphorus Differential per 0.01% within 0.09-0.12% range

IOPPR00 Iron Ore Phosphorus Differential per 0.01% within 0.09-0.10% range

IOPPT00 Iron Ore Phosphorus Differential per 0.01% within 0.010-0.11% range

IOPPU00 Iron Ore Phosphorus Differential per 0.01% within 0.011-0.12% range

IOPPV00 Iron Ore Phosphorus Differential per 0.01% within 0.012-0.15% range

Platts alumina and silica differentials are reflective of the 1% value within specific bands of alumina and silica as stated above, for which they are deemed to be linear. These values are determined by comparing the alumina and silica values of spot trades of 60-63.5% Fe cargoes. Values are also determined from data gathered from industry sources buying or selling 60-63.5% Fe cargoes with differing alumina and silica impurities. Additionally any flat price discounts or premiums to IODEX or 60-63.5% Fe trades can also be used to establish these values.

The Platts phosphorus differential is reflective of the incremental value of 0.01% within the 0.09-0.12% range contained in a specification of iron ore fines. The value is determined from by comparing phosphorus values reflected in spot trades of 60-63.5% Fe cargoes. The assessment is determined from data gathered from market sources buying or selling iron ore fines 60-63.5% Fe cargoes with differing phosphorus content, as well as an analysis of flat price discounts or premiums to IODEX or 60-63.5% Fe trades.

### Per 1% Alumina and Silica Differentials (Range 55-60% Fe)

TSIAI00 Iron Ore Silica Differential per 1% within 55-60% Fe Fines

TSIAF00 Iron Ore Alumina Differential per 1% within <5% (55-60% Fe Fines)

The low grade alumina and silica differentials are reflective of

1% value in fines containing above 55% and up to 60% Fe. These values are determined by comparing the alumina and silica values of spot trades of 55-60% Fe cargoes. Values are also determined from data gathered from industry sources buying or selling 55-60% Fe cargoes with differing alumina and silica impurities. Additionally any flat price discounts or premiums to IODEX or 60-63.5% Fe trades can also be used to establish these values.

IODEX 62% Fe CFR China & TSI Iron Ore Fines 62% Fe CFR China

Platts considers the following iron ore medium grade fines brands for these assessments: Pilbara Blend Fines, Newman High Grade Fines, Brazilian Blend Fines, Mining Area C Fines and Jimblebar Fines. Platts considers the typical specifications of these brands when normalizing back to the assessment specification, unless notified of specific cargo quantity. Platts continuously reviews whether brands cease to be or become sufficiently fungible to be considered in the IODEX & TSI-62% assessment processes. Platts considers full & part cargoes of the above medium grade fines brands, and also combined cargoes comprising of two different fines grades.

Platts MOC assessment process reflects common market practice. Platts has observed that brands of iron ore are typically sold against the standard spot contract terms of the mining company producing and marketing the brand or against base contracts that do not differ materially from the miner's spot contract terms. Platts may publish bids, offers and trades that carry different terms and conditions, but may normalize these when considered in the final assessment.

More broadly, Platts publishes transactions, bids and offers in its MOC assessment process that reflect the standard trading terms agreed between different market participants. For instance, if companies commonly trade outside of the MOC using a Letter-of-Indemnity, Platts would consider it reasonable for those two companies to transact using an LOI for trades concluded in the MOC.

Platts observes that trading against an LOI is a typical market practice in iron ore. Platts does not reflect cargoes offered against original bill of lading (OBL) discharge in its MOC assessment process.

Platts reflects bids, offers and trades reported in the MOC assessment process whose document presentation period is no longer than 35 days after the shipment date. Participants in the MOC process should clearly state in offers if the presentation period is longer.

Platts considers the above terms as common market practice. Platts continues to track terms used in iron ore trade and may update this list according to market developments. In all circumstances, Platts reverts back to reflecting common market practice.

For reported transactions, when trades are concluded at levels that have not been fully tested by the market because price changes have been non incremental, Platts may determine that actual market value is somewhere between the last incremental bid or offer and the transaction at the gapped level.

### Normalization for quality

Platts defines base specifications for which deals, bids and offers are normalized to. Quality normalization involves adjusting for differences in chemical, physical and metallurgical properties, with the latter two especially critical in lump and pellet valuation.

In normalizing for chemical quality, the most important factors Platts reflects are iron, alumina, silica and phosphorus. Platts normalizes for differences in iron content by adjusting on an iron unit basis, when the alumina and silica contents of an observed product approximate those underlying the Platts assessments. For example, a cargo with specifications of 61%-Fe, 1.9% alumina and 2.7% silica will be normalized by dividing its price (transacted, bid or offered) by 61 and then multiplying the result by 62 for normalization to IODEX specifications, and in

accordance with industry practice. Additional adjustments will be made for alumina and silica to reflect the underlying Platts assessments.

Ores of grades below 60% Fe and above 63.5% Fe may not be used directly in the formation of the 62% Fe IODEX due to a lack of linearity in the price escalation/de-escalation on a per Fe basis outside this range. They may however be referred to as an indicator of general price direction. Ores of below 60% Fe may be considered in the 58% Fe assessments, while ores with above 63.5% Fe may be considered in the 65% assessment.

Other impurities like sulfur, alkalis and loss on ignition (LOI) are also considered in the normalization process where known to have significant impact on value.

#### Outright, differential and spread prices

Platts normalizes outright values of iron ore as well as differentials when they trade with reference to a benchmark.

Platts physical price assessments use a variety of inputs, including outright price bids/offers/trades, floating price bids/offers/trades and spread price bids/offers/trades. Platts' objective is to assess the prevailing tradable outright price of iron ore at the close of the market assessment period. In the event of an observed conflict between outright values and differentials or spreads, outright values prevail in Platts final published assessments.

Platts establishes the hedgeable, outright value of floating and spread price indications by applying them to the observable, prevailing value of underlying relevant derivatives instruments.

#### Timing and time gradient

The delivery time of cargoes can also impact its price. Platts normalizes trades, bids and offers for cargoes being delivered between 2 to 8 weeks (14-56 days) forward from the date of publication, and does not include one-off or distressed trades where either the buyer or seller has left it too late to transact

within acceptable lead times that can typically be met by counterparties in the normal course of business. Platts adds the average estimated sailing time from loadport to Qingdao, to the last date of the loadport laycan, to determine if the latest arrival date of the shipment falls within the Platts delivery window.

Platts assess to the middle of the 2 to 8 week delivery period. Backwardation and contango is factored into all assessments. The assessments thus reflect the value after taking into consideration the difference in prices prevailing along the time curve assessed by Platts.

The variability in price increases as the backwardation or contango in the markets increase in gradient. By normalizing prices to the mid-point of a clearly defined date range, the consistency of prices is maintained. The day-to-day changes in the price assessments therefore reflect an actual price move in the value of the commodity, rather than an artificial change because a cargo happens to be loading/delivering in the front end of the window rather than the back end, or vice versa.

In a contango market, the excess of prompt material causes the front end to be significantly cheaper than material available at the end of the window. In a backwardated market the tightness of supply causes the prompter volumes to be at a higher price than iron ore available at the end of the window. Platts methodology eliminates any arbitrary movement in assessments caused simply by the different loading/delivery ranges traded.

Platts assessments reflect fair market value and therefore take into consideration backwardation and contango. Where indications are on differing date ranges, a calculation is made to determine the value the market is assigning for the difference between loading dates. In calculating this time gradient, the prices of tradable instruments, including derivatives such as futures and swaps, may be used. Typical calculations include a determination made for the difference in price over a month; a granular value is then calculated from this for each day.

Platts assessments seek to be inclusive of the various types and time frames of trade within markets. Any transaction that is negotiated as part of a framework of longer-term contractual arrangements (term deals) will be excluded from the assessment process.

#### **IOCLP00 IO Spot Lump Premium 62.5% CFR CHINA**

The daily assessment is of the premium lump commands over the price of fines as defined by the Platts 62%-Fe Iron Ore Index specification. Market information obtained on a flat price basis is converted to a premium on a dmtu basis.

The lump premium is assessed as a premium over the IODEX swap month which lies at the middle of the Platts delivery window, or 35 days forward from the date of publication, also known as the Mid-Window Month.

For all lump premium indications over a base month other than the Mid-Window Month, Platts normalizes these to the Mid-Window Month using the iron ore fines derivatives forward curve.

This is to ensure that the underlying structure of the iron ore fines base is accounted for when assessing the lump premium, and to compare all lump premium indications against the same base.

Metallurgical properties have not been specified in line with current spot trading convention, as tests are not typically conducted on each cargo, whether at load or discharge port. Market participants evaluate the premium each brand commands, incorporating chemical, physical and metallurgical properties, in large part based on prior knowledge of these properties and experience using the products.

#### **IOBFC04 Spot Blast Furnace Iron Ore Pellet Premium 65% CFR CHINA (Weekly)**

The assessment is of the premium that blast furnace pellet

commands over the price of fines as defined by the Platts 62%-Fe Iron Ore Index, and after adjustment to 65%-Fe basis. This assessment is published every Wednesday or the nearest previous business day. Market information obtained on a flat price basis can be converted to a premium on a dmt basis.

Metallurgical properties have not been specified in line with current spot trading convention, as tests are not typically conducted on each cargo, whether at load or discharge port. Market participants evaluate the premium each brand commands, incorporating chemical, physical and metallurgical properties, in large part based on prior knowledge of these properties and experience using the products.

The spot blast furnace pellet premium assessment will reference 65%-Fe, Alumina 0.35%, Silica 5%, 0.02% Phosphorus, 0.003% Sulfur, 250 Cold Crushing Strength (CCS), and a maximum sizing of 2.5% under 5 mm.

#### **IOCQS04 Spot Blast Furnace Iron Ore Pellet Premium 64% CFR CHINA (Weekly)**

The assessment is of the premium that blast furnace pellet commands over the price of fines as defined by the Platts 62%-Fe Iron Ore Index, and after adjustment to 64%-Fe basis. This assessment is published every Wednesday or the nearest previous business day. Market information obtained on a flat price basis can be converted to a premium on a dmt basis using Mid Window Month Swaps.

Metallurgical properties have not been specified in line with current spot trading convention, as tests are not typically conducted on each cargo, whether at load or discharge port. Market participants evaluate the premium each brand commands, incorporating chemical, physical and metallurgical properties, in large part based on prior knowledge of these properties and experience using the products.

The spot blast furnace pellet premium assessment will

reference 64%-Fe, Alumina 2.70%, Silica 3.5%, 0.08% Phosphorus, 0.08% Sulfur, 230 Cold Crushing Strength (CCS), and a maximum sizing of 5.0% under 5 mm.

#### **IOCQR04 Spot Blast Furnace Iron Ore Pellet 64% CFR CHINA (Weekly)**

The assessment is a fixed CFR China price of the 64% Fe blast furnace pellet. This assessment is published every Wednesday or the nearest previous business day. Platts reflects bids, offers and trades reported in the assessment process. For reported transactions, when trades are concluded at levels that have not been fully tested by the market because price changes were non incremental, Platts may determine that actual market value is somewhere between the last incremental bid or offer and the transaction at the gapped level.

Metallurgical properties have not been specified in line with current spot trading convention, as tests are not typically conducted on each cargo, whether at load or discharge port. Market participants evaluate the premium each brand commands, incorporating chemical, physical and metallurgical properties, in large part based on prior knowledge of these properties and experience using the products.

The spot blast furnace pellet premium assessment will reference 64%-Fe, Alumina 2.70%, Silica 3.5%, 0.08% Phosphorus, 0.08% Sulfur, 230 Cold Crushing Strength (CCS), and a maximum sizing of 5.0% under 5 mm.

#### **IOPEX**

On August 1, 2017 Platts launched its iron ore port stocks indices, or IOPEX. These include two regional iron ore fines assessments as well as Pilbara Blend Fines and Newman Fines assessments in both regions. Platts also launched import parity port stocks assessments.

**IOPBN00 IOPEX 62% Fe FOT East China RMB/WMT:** this daily

assessment in Yuan/wet mt reflects trade activity in Rizhao & Qingdao. The most competitive values observed in either port reflected form the basis of the assessment.

**IOPBG00 Pilbara Blend Fines FOT East China:** this daily assessment reflects the tradeable value of this brand in Rizhao & Qingdao.

**IOPBH00 Newman High Grade Fines FOT East China:** this daily assessment reflects the tradeable value of this brand in Rizhao & Qingdao.

**IOPDC00 IOPEX 62% Fe FOT E. China USD/DMT:** this daily assessment reflects the tradeable value of medium grade fines on an import parity basis, accounting for port charges and VAT. This assessment is a USD/DMT equivalent of the E. China IOPEX RMB/DMT assessment.

**IOPBL00 IOPEX 62% Fe FOT North China RMB/WMT:** this daily assessment in Yuan/wet mt reflects trade activity in Caofeidian & Jingtang. The most competitive values observed in either port reflected form the basis of the assessment.

**IOPBE00 Pilbara Blend Fines FOT North China:** this daily assessment reflects the tradeable value of this brand in Caofeidian & Jingtang.

**IOPBF00 Newman High Grade Fines FOT North China:** this daily assessment reflects the tradeable value of this brand in Caofeidian & Jingtang.

**IOPCC00 IOPEX 62% Fe FOT N. China USD/DMT:** this daily assessment reflects the tradeable value of medium grade fines on an import parity basis, accounting for port charges and VAT. This assessment is a USD/DMT equivalent of the N. China IOPEX RMB/DMT assessment.



## Iron Ore Seaborne Brand Assessments

Platts launched on September 3, 2018 daily seaborne iron ore brand assessments for Pilbara Blend Fines, Newman High Grade Fines, Brazilian Blend Fines, Mining Area C Fines and Jimblebar Fines on a fixed and floating price basis. Platts added on March 1, 2019 additional brand assessments for 57% Fe Yandi fines on a fixed and floating basis. Platts assesses these brands timestamped to 5.30pm, aligning them to the assessments of IODEX and TSI-62%.

Platts assesses these brands against their typical specifications, using information collected throughout the day from active market participants across the supply chain. The floating price brand assessments are calculated from the fixed price assessments. The value published for brand assessments on a floating price basis are derived from the front-month swap assessment (TSIPM01).

## EMEA

SB01095 Atlantic Basin Iron Ore Pellets FOB Basis (cent/

**dmtu) (monthly):** This monthly calculated value <SB01095> reflects a provisional contract settlement price for iron ore blast furnace pellets typically sold in term contracts, to steel mills primarily in Europe. It is published on the first business day of each month and then throughout that month in Steel Markets Daily and accessible on the SBB price analyzer. The calculated formula for the assessment takes the monthly average netback to Brazil <IONBB03> of the previous month, as its pricing basis. The quality is adjusted to 65% Fe, as a basis for pellet pricing, by adding (x3) 1% Fe differential monthly average <IOMGD03> also for the previous month. Additionally each month Platts editors assess a pellet premium (IOBFP00) in US\$, reflecting an additional charge, over the quality adjusted iron ore fines. This is part of the total calculated value. A cent/ferrous unit price is calculated by dividing the sum value by 65.

The Atlantic Basin Iron Ore Pellets assessment will reference 65% Fe; Silica 3%; Alumina 0.5%; CCS 275; LTD +6.3 mm, 80; Sizing over 9 mm is >94%; Sizing below 6.3 mm <2.5%.

**IOBFP00 Atlantic Basin Iron Ore pellet premium (\$US/dry mt) (monthly):** This is a monthly assessed value reflecting a

provisional pellet premium contract settlement price for iron ore blast furnace pellets typically sold in term contracts, to steel mills primarily in Europe. This value reflects an additional charge, over the quality adjusted iron ore fines.

**IODRP00 Iron Ore Direct Reduction Pellet Premium (\$US/dry mt) (monthly):** A monthly assessment reflecting the value of 'premium' used in formulating a provisional contract settlement price for iron ore direct reduction pellets typically sold in term contracts, to steel mills primarily in Middle East & North Africa, and also in the Americas. This value reflects an additional charge for a high quality 67.5% Fe DR grade pellet, net of any further quality adjustments and including the 2.5% Fe over a 65% Fe fines basis. It is published on the first business day of each month and then throughout that month in Steel Markets Daily.

The DR pellet premium specifications and parameters are as follows:

67.5% Fe, 1.5% Silica, 300 CCS, and sizing over 9 mm >94%.

## IRON ORE PAPER SWAPS

Assessment	Code	Mavg	Wavg	Quality	Quantity	Dimensions	Location	Timing	Payment terms	UOM
TSI Iron Ore 62% Fe Paper Swaps M0	TSIPM00			Basis TSI Iron Ore Fines 62% Fe CFR China assessment	Not specified	Not specified	CFR Qingdao	Month of prevailing assessment date	Not specified	\$/dmt
TSI Iron Ore 62% Fe Paper Swaps M1	TSIPM01			Basis TSI Iron Ore Fines 62% Fe CFR China assessment	Not specified	Not specified	CFR Qingdao	First month after month of prevailing assessment date	Not specified	\$/dmt
TSI Iron Ore 62% Fe Paper Swaps M2	TSIPM02			Basis TSI Iron Ore Fines 62% Fe CFR China assessment	Not specified	Not specified	CFR Qingdao	Second month after month of prevailing assessment date	Not specified	\$/dmt
TSI Iron Ore 62% Fe Paper Swaps M3	TSIPM03			Basis TSI Iron Ore Fines 62% Fe CFR China assessment	Not specified	Not specified	CFR Qingdao	Third month after month of prevailing assessment date	Not specified	\$/dmt
TSI Iron Ore 62% Fe Paper Swaps Q1	TSIPQ01			Basis TSI Iron Ore Fines 62% Fe CFR China assessment	Not specified	Not specified	CFR Qingdao	First quarter after quarter of prevailing assessment date	Not specified	\$/dmt
TSI Iron Ore 62% Fe Paper Swaps Q2	TSIPQ02			Basis TSI Iron Ore Fines 62% Fe CFR China assessment	Not specified	Not specified	CFR Qingdao	Second quarter after quarter of prevailing assessment date	Not specified	\$/dmt
TSI Iron Ore 62% Fe Paper Swaps Q3	TSIPQ03			Basis TSI Iron Ore Fines 62% Fe CFR China assessment	Not specified	Not specified	CFR Qingdao	Third quarter after quarter of prevailing assessment date	Not specified	\$/dmt
TSI Iron Ore 62% Fe Paper Swaps CY1	TSIPY01			Basis TSI Iron Ore Fines 62% Fe CFR China assessment	Not specified	Not specified	CFR Qingdao	First year after year of prevailing assessment date	Not specified	\$/dmt
Iron Ore Lump Premium ppr swaps BalMo \$/dmtu	AAQUA00			Basis Spot Lump Premium 62.5% CFR China	Not specified	Not specified	CFR Qingdao	Month of prevailing assessment date	Not specified	\$/dmtu
Iron Ore Lump Premium ppr swaps Mo01 \$/dmtu	AAQUA01			Basis Spot Lump Premium 62.5% CFR China	Not specified	Not specified	CFR Qingdao	First month after month of prevailing assessment date	Not specified	\$/dmtu
Iron Ore Lump Premium ppr swaps Mo02 \$/dmtu	AAQUA02			Basis Spot Lump Premium 62.5% CFR China	Not specified	Not specified	CFR Qingdao	Second month after month of prevailing assessment date	Not specified	\$/dmtu
Iron Ore Lump Premium ppr swaps Mo03 \$/dmtu	AAQUA03			Basis Spot Lump Premium 62.5% CFR China	Not specified	Not specified	CFR Qingdao	Third month after month of prevailing assessment date	Not specified	\$/dmtu

### Iron Ore Paper Swaps

Platts publishes daily assessments for monthly, quarterly and next calendar year CFR North China iron ore swaps. These financial instruments are traded fixed price (e.g. \$80/mt) or in intermonth spreads.

Platts publishes daily assessments for monthly Lump Premium CFR China iron ore swaps. These swaps are traded on a \$/dmtu basis as a premium to IODEX or in intermonth spreads. The lump swaps settle against Platts Spot Lump Premium Assessment (IOCLP00).

Swaps are derivatives which settle off the average value of

the underlying assessment price, as published on each day during the month of trade (e.g. November). The fines swaps settle against TSI Iron Ore Fines 62% Fe CFR China (TS01021). Platts publishes swaps assessments for current month (M0), month one (M1), second month (M2) and third month (M3) strips. Platts also publishes assessments for the next three calendar quarterly swap. Monthly assessments will be rolled on the first day of the month. For example, during October 2009 the M1 iron ore swap will be November 2009, M2 will be December 2009, and the published quarterly swap will be Q1 2010. On November 1 the M1 iron ore swaps will roll to December, M2 will roll to January, and the quarterly swap will still be Q1 2010. For the current month swap, the value is assessed as long as there is sufficient liquidity on the relevant strip to do so.

**Timing:** Swaps assessments reflect a market-on-close value at 17:30hrs Singapore time. The assessments reflect the tradable level at this time. Swaps bids/offers and trades are reported in real-time throughout the day on Platts' electronic information service, Platts Metals Alert (PMA) and a summary of trades published after market close in Platts Steel Markets Daily. Full calendar month swaps for the month-ahead and the subsequent month are quoted throughout the calendar month prior to rollover. Rollovers occur on the first working day of the month.

**General reporting principles applicable to all derivatives markets:** Platts only publishes and evaluates information from sources considered credible and creditworthy. Bids/offers of paper swaps received by Platts after published timing cut-off

guidelines are disregarded and not published.

Firm, executable bids or offers posted onto Platts Metals Alert page 700 are taken into consideration for assessments. Assessments are a reflection of deals and bid/offers and are subject to careful review. Information is cross-checked to ensure data integrity. Assessments reflect the value of market on close. Illiquid markets may be assessed relative to more active benchmarks with more accurate price discovery. Transactions done after market close are disregarded.

### **Brief explanation of derivatives terminology:**

**Swap:** Swaps or 'paper' are risk management tools which allow users to lock in values by transforming floating price risk to fixed or fixed to floating. Swaps are also used as a speculative tool. Paper markets are very reactive and provide players with

an instant feedback of market conditions. Platts reflects the immediate changes in swaps market values as market hears on Platts Metals Alert page 700.

**Financial settlement:** Unlike physically-settled forward cargo trades, paper swaps are financially-settled derivative contracts. For example, the difference between buying an "April iron ore cargo" and an "April iron ore swap" is this: in the first case the buyer would take delivery of a cargo of the product, while in the second case the buyer would pay (or be paid) the difference between the swap price and the average of Platts' iron ore cargo assessments in April.

**Month:** A calendar monthly swap is quoted for the full month calendar month, i.e. from the first to the last business working day in the month. Then the monthly swap assessment is rolled over.

**Quarter:** Quarters are defined as calendar quarters, for example Q3 refers to July, August and September. Quarterly swap assessments roll four times a year on the first business days of January, April, July and October.

**Year:** A year is defined as a calendar year, for example 2015, i.e. from the first to the last business working day in that year.

**Time spreads:** Each market has its own timing structure, defined by the steepness of price backwardation or contango. This timing structure changes constantly, and a swaps market can develop around the correlations between prompt and forward timings. Swaps are frequently traded on a month against month basis, as well as quarter against quarter and year against year.

## FREIGHT AND NETBACKS

Assessment	Code	Mavg	Wavg	Quality	Quantity	Dimensions	Location	Timing	Payment terms	UOM
IODEX netback Australia Capesize \$/DMt	IONBA00	IONBA03		moisture 8.03	NA	NA	FOB Port Hedland	NA	NA	\$/dmt
IODEX netback West India Panamax \$/DMt	IONBI00	IONBI03		moisture 8.11	NA	NA	FOB Mormugao	NA	NA	\$/dmt
IODEX netback Brazil Capesize \$/DMt	IONBB00	IONBB03		moisture 9.00	NA	NA	FOB Tubarao	NA	NA	\$/dmt
IODEX netback NW Europe	IONBR00	IONBR03		moisture 9.00	NA	NA	CFR Rotterdam	NA	NA	\$/dmt
IODEX netback South Africa Capesize \$/DMt	IONSA00	IONSA03		moisture 3.00	NA	NA	FOB Saldanha Bay	NA	NA	\$/dmt
58%-Fe netback West India Supramax \$/DMt	IODFA00	IODFA03		moisture 11%	NA	NA	FOB Mormugao	NA	NA	\$/dmt

### Freight and Netbacks

Please see our Freight/Shipping Methodology and Specifications Guide at <http://www.platts.com/methodology-specifications/shipping>.

The FOB netbacks published daily are automatically calculated using a formula that deducts the respective dry bulk freight assessments from the day's IODEX 62% Fe iron ore assessments on a CFR Qingdao basis and 58% Fe iron ore assessment CFR Qingdao, assuming moisture commonly seen in ores of various origins. Reference ports are Port Hedland, Mormugao, Haldia/Paradip, Tubarao, Rotterdam, Saldanha Bay.

For example, Iron ore 58%-Fe netback West India Supramax

price is automatically calculated by deducting the assessed Iron Ore Mormugao, WC India – Qingdao Supramax freight rate for a 50,000 mt cargo from the IO Fines Fe 58% CFR China assessment on the day, after normalizing the assumed moisture level of 11% for iron ore cargoes loading from West Coast India to a dry metric ton basis.

The NW Europe IODEX netback is calculated by adding the Platts Tubarao to Rotterdam Capesize freight assessment to IODEX Brazil netback.

All freight assessments and FOB netbacks are published in Platts SBB Steel Markets Daily and Platts Metals Alert PMA page MW1106.

## REVISION HISTORY

**August 2019:** Added explanation on the iron ore 58%-Fe FOB netback calculations.

**June 2019:** Updated to reflect inclusion of Jimblebar fines in Platts 62% IODEX CFR China and the launch of 57% Fe Yandi Brand Assessments. Platts completed an annual update to sections 1 to 6 of Platts Methodology and Specifications Guides in April 2019, and moved these sections into a standalone Methodology Guide.

**January 2019:** Updated to reflect Iron Ore Phosphorus Differentials and weekly Spot Blast Furnace Iron Ore Pellet 64% CFR China and Spot Blast Furnace Iron Ore Pellet Premium 64% CFR China assessments. Clarified timing cargo delivery timing calculation.

**September 2018:** Methodology & Specifications Guide Annual Review was conducted and clarifications made, including sections I-VI. Platts added details around the new iron ore seaborne brand assessments.

**May 2018:** Updated to reflect change in China's VAT rate and consequent impact on the name of domestic concentrate assessment (SB01159).

**January 2018:** Updated to reflect TSI-IODEX methodology merger, additional assessment launches. On January 2, 2018, Platts merged the TSI-62% (TS01021) and IODEX-62% (IODBZ00) price series as well as the TSI-58%, 1.5% Alumina (TS01047) and

the Platts 58% low-Alumina assessment (IONC580).

**December 2017:** Updated to reflect launch of Lump Premium swaps assessments.

**November 2017:** Added section describing use of floating price indications in iron ore assessments.

**October 2017:** Methodology & Specifications Guide Annual Review was conducted and clarifications made.

**August 2017:** This methodology guide was updated to reflect the increase in frequency of the lump premium assessment to daily from weekly, and to reflect the launch of the IOPEX port stock assessments.

**February 2017:** This methodology guide was updated to reflect the launch of a current month swap assessment (AAQTA00), from February 1, 2017.

**September 2016:** Methodology & Specifications Guide Annual Review was conducted and clarifications made.

**July 2016:** This methodology guide was updated to reflect the discontinuation of the daily 52%-Fe Iron Ore price assessment (IONC520), from July 1, 2016.

**June 2016:** This methodology guide was updated to reflect the discontinuation of the daily 63.5/63%-Fe Iron Ore price assessment (IODSC00) from June 1, 2016.

**October 2015:** This methodology guide was updated to include the new spot 65%-Fe blast furnace blast furnace pellet premium assessment which was launched October 7, 2015. The quarterly lump premium contract price section was also taken out as it is no longer relevant or utilized in the market. The moisture content for the IO Fines 65% Fe CFR China assessment was also updated.

**July 2015:** This methodology guide was updated to include product specifications for IOBFP00 Atlantic Basin iron ore pellet premium and SB01095 Atlantic Basin Iron Ore Pellets FOB Basis, which was added effective July 1, 2015. The Platts DR pellet premium assessment was added, as well as details on the IODEX netback Rotterdam, both launched July 1, 2015.

**May 2015:** This methodology guide was updated to include the new phosphorus differential assessment which was launched May 18, 2014.

**February 2015:** This methodology guide was updated to include further description of Platts' processes and practices in survey assessment environments.

**July 2014:** Platts revamped all Metals Methodology and Specification guides, including its Iron Ore guide, in July 2014. This revamp was completed to enhance the clarity and usefulness of all guides, and to introduce greater consistency of layout and structure across all published methodology guides. Methodologies for market coverage were not changed through this revamp, unless specifically noted in the methodology guide itself.